

IMEO METHANE SCIENCE STUDY FRAMEWORK

1. Purpose and Scope of the Framework Document

- 1.1. The methane science study under the framework of the International Methane Emissions Observatory (IMEO) (hereafter referred to as the “**Science Study**”) is a workstream aimed at better understanding, quantifying, verifying, and reconciling global anthropogenic methane emissions through a series of measurement studies of the methane emissions associated with human activities.
- 1.2 This Framework document (the “**Framework**”) lays out the structure of the Science Study and the linkages to the IMEO governance structure.

2. The Science Study

- 2.1. The Science Study consists of multiple studies, referred as “**individual studies**”, as approved by the IMEO Scientific Oversight Committee (SOC), following the recommendation of the Chair of the SOC.
- 2.2. The individual studies will contribute to closing the knowledge gap in the location and magnitude of methane emissions along fossil fuel value chains (and, at a later stage, in the agriculture and waste sectors) through peer-reviewed studies and the reconciliation of measurement data.
- 2.3. IMEO shall retain a qualified, senior academic/researcher (the “**Principal Investigator**” or “**PI**”) to lead each individual study who will oversee the design and execution of the individual study, including, methods, measurement strategy, site selection criteria, and protocols.
- 2.4. Unless otherwise agreed by IMEO’s SOC, the final work-products of the individual studies will be scientific manuscripts estimating methane emissions from human activities. If budget or data limitations constrain the Principal Investigator’s ability to make robust estimates methane emissions, the final work-products shall be a manuscript(s) outlining methane emissions based on identifying research gaps that require additional data to be able to accurately estimate methane emissions.
- 2.5. Each PI shall be responsible for collecting, interpreting, and analyzing the required data and, unless otherwise agreed with the SOC, shall prepare the manuscript to be submitted to a reputable peer-reviewed scientific journal related to the results of that individual study.

3. Methodology

- 3.1. The scope and/or terms of reference of each individual study shall be approved in line with the IMEO SOC before an individual study can proceed.

3.2. Data collection and related research for the individual study shall be based on deployment of the best available measurement protocols, as determined by the Principal Investigator, having considered input from the SOC.

3.3. Methane emission rates and other scientific data collected as part of any individual study shall be collected, analyzed, and made public through a manuscript(s) submitted for publication in a reputable scientific peer-reviewed journal and their supporting information.

4. The Manuscript

4.1. In accordance with Art. 2.4 the culmination of each individual study shall be the preparation of a manuscript(s) and submission to a reputable scientific journal or publication (**the “Manuscript(s)”**) setting forth each Individual Study’s findings.

4.2. Each Manuscript shall be created pursuant to the following process:

4.2.1. The relevant PI shall lead the drafting of the manuscript, (the “Drafter”) and work with other members of the team that delivered the Individual Study as needed.

4.2.2. Once a full draft of the manuscript is completed and accepted by all co-authors, it shall undergo, prior to submission to a journal, a series of internal review. First, the IMEO Science Advisors will have three weeks to review. Then, a revised version will be shared with the SOC, which will also have three weeks to review. As applicable, the paper will be simultaneously submitted to individual study partners, which will have two weeks. Finally, the manuscript will be submitted to the Executive Board for final approval.

4.2.3. Final editorial, scientific and other substantive decisions regarding the Manuscript rest with the PI. In the event there is reasonable good faith disagreement between any reviewer and the PI as to any factual content in the manuscript (e.g., the inclusion or exclusion of certain data, the interpretation of any data or measurements, any conclusions drawn from the data, etc.), such disagreement shall be noted in an acknowledgement in the Manuscript. No such disagreement shall preclude the PI from submitting the manuscript for publication.

4.2.4. After addressing any scientific comments from the Co-Chairs, IMEO Scientific Oversight Body and IMEO Executive Board, the PI will submit the manuscript to a reputable peer reviewed scientific journal for consideration for publication. Participants shall keep findings and data confidential until results of an Individual Study are published in a scientific journal.

5. IMEO Executive Board

- 5.1. The IMEO Executive Board will guide the strategic direction of the Science Study and will ensure its policy relevance, endorse its annual work plan, and oversee its budget.
- 5.2. The IMEO Executive Board is responsible for governing the overall scope and budget of the Science Study and any Individual Study.
- 5.3. If the IMEO Executive Board cannot come to an agreement with respect to a purely scientific issue, then the IMEO Executive Board shall refer the matter to the IMEO Scientific Oversight Committee and ask it to make a recommendation for the IMEO Executive Board's consideration as to the best approach.

6. Scientific Oversight

- 6.1.1. The Scientific Oversight Committee will guide and oversee the scientific activities of IMEO, including, but not limited to, overseeing estimation methodologies, recommending which studies are necessary and ensuring there are no key data gaps across the studies. Furthermore, the SOC will oversee efforts to develop new analytical methods that produce data products that are more effective, more easily deployed, or more accurate than existing products.
- 6.2. To help address key scientific issues related to successfully meeting the purpose of the studies, the IMEO Executive Board shall nominate two **Co-Chairs** following recommendation from the Scientific Oversight Body. The role of the Co-Chairs shall be to develop scientific approaches for the Science Study and Individual Studies including without limitation:
 - 6.2.1. Recommend which Individual Studies are necessary;
 - 6.2.2. Suggest potential PIs for Individual Studies;
 - 6.2.3. Suggest methodological frameworks for PIs;
 - 6.2.4. Ensure effective coordination among PIs and that synergies are being realized;
 - 6.2.5. Ensure work is done at a high level/standard;
 - 6.2.6. Ensure there are no key data gaps across the Individual Studies;
 - 6.2.7. Assist, as requested, the PIs and Technical Workgroup with the development of measurement strategies and protocols;
 - 6.2.8. Assist in the analysis and summarization of data collected through all of the Individual Studies and its integration;
 - 6.2.9. Provide comments on draft manuscripts to Individual Study PIs during manuscript preparation; and
 - 6.2.10. Lead the development of an overall project synthesis, summarizing the results of all Individual Studies and any remaining gaps.

7. Individual Study Partners

- 7.1. For each individual study, an individual study partner may decide to support the study by engaging directly with the research team leading the study. Individual study partners may be any institution or organization, public or private, with activities relevant to the project.
- 7.2. Individual study partners will communicate directly with the PIs to share relevant data and information and may, as needed, sign a confidentiality agreement directly.
- 7.3. The individual study partners will serve in an advisory role and will have no authority to require changes to the scope or strategy of the individual study or otherwise take any action designated hereunder to the IMEO SOC or any other party or body.

8. Other Bodies

- 8.1. The IMEO Executive Board may also, from time to time, form other committees, panels, or workgroups (e.g. a Press Group) to attend to a particular strategic component of the Science Study or any Individual Study, but all decision-making authority with regard to the scope and fiscal aspects of the Science Study and any Individual Study shall at all times remain vested in the IMEO Executive Board.

9. Confidentiality

- 9.1. The handling of confidential information shall be subject to each party's corporate confidentiality policies.
- 9.2. Aggregated results of the measurement study will be published and discussed in peer-reviewed journal articles. Additionally, and adhering to common journal standards, raw measurement data will be provided to the public upon request. However, emissions estimates of specific facilities and data provided by the operator related to the location and activities of facilities will remain confidential.
- 9.3. Nothing contained in the Framework shall in any way restrict or impair the PI's right to use, disclose, or otherwise deal with any portion of Confidential Information which:

9.3.1. is or becomes generally available to the public through no wrongful act or omission of the Recipient;

9.3.2. was in the Recipient's possession prior to the time it was acquired from the Disclosing Party free from any obligation as to confidentiality and was not acquired, directly or indirectly, from the Disclosing Party;

9.3.3. is required to be disclosed by court order or operation of law, to the extent of such requirement only, provided the Recipient insofar as it is able, gives reasonable notice to the Disclosing Party prior to such disclosure to allow the Disclosing Party to contest such disclosure and provided further that the Recipient takes reasonable steps, at the expense of the Disclosing Party, to assist in contesting it if so requested and complies with any applicable protective order or equivalent;

9.3.4. is independently made available to the Recipient as a matter of right by a third party free from any obligation as to confidentiality; or

9.3.5. is independently developed by or for the Recipient without use or reference to Confidential Information.

10. Manuscript Dissemination by Participants

10.1. Until a Manuscript is publicly released by the peer-reviewed journal that is publishing it, no party may release or disseminate any of its top-level results or any non-public technical data pertaining to any Individual Study to the public except by a decision of the IMEO SOC. Upon publication of the Manuscript or earlier subject to the mutual agreement of the IMEO Executive Board, parties are free to comment publicly on the Science Study and any individual study and to disseminate, use and comment on the Manuscript as they see fit.

11. No Publicity

11.1. Prior to the results of the Science Study and/or any Individual Study being published in a Manuscript or any prior IMEO Executive Board -approved release or authorized communication no Participant shall:

11.1.1. refer publicly to top-level results from the Science Study or any Individual Study; or

11.1.2. mention any other Participant in any advertising, marketing, or public relations material without the prior written approval of the referenced Participant; provided, however, that once the Manuscript is publicly released, no Participant shall unreasonably withhold such consent.

11.2. Participants may however publicly list other Participants.

11.3. Each Participant may also communicate with its directors, shareholders, Affiliates, members, employees, agents, and, with regard to EDF and UNEP, potential or existing funders, about the Science Study and any Individual Study, subject to any restrictions on the disclosure of Confidential Information.

12. No Restraint

12.1. As the work of the Science Study proceeds, all parties may pursue their business and advocacy activities as they see fit. Likewise, no Participant shall in any way be precluded from participating in any other emission measurement studies and activities.

1. Advisory Council TOR

Terms of Reference for IMEO Advisory Council

The Advisory Council will provide the Executive Board of IMEO with relevant information, data, and considerations and will serve as an important mechanism to engage different constituencies in the discussion of IMEO strategies and policies. This Council will be chaired by the Chair of the IMEO Executive Board who can delegate this function to the IMEO head.

Each of the following constituency will form a Mirror Group from which two members will be selected to represent each Mirror Group in the Advisory Council:

- Industry – strictly limited to OGMP member companies and industry associations whose members are largely in OGMP.
- NGOs and foundations – including EDF, RMI, WRI, Ember etc.
- IGOs – including the IEA, development banks, UN agencies such as WMO and the UN economic commission for Europe.
- Science – the methane, climate and data science research institutions
- Governments – The state actors are represented on the Executive Board – although limited to those who have provided material funding.

Responsibilities of the Advisory Council

It is expected that the eleven members (ten representatives and the IMEO head) of the Advisory Council meet twice a year (at least once physically once conditions allow).

The Council will be engaged, but not limited to the following topics:

- Strategic view on IMEO theory of change and its effectiveness
- Next round of studies
- Feedback on data integration strategy
- Provide inputs and feedback to the exec board on all 3 IMEO workstreams,
- Support in expanding OGMP membership

Responsibilities of the Mirror Groups

It is expected that the Mirror Groups meet virtually only. Their work is to ensure representation and input to the advisory council. This includes the following tasks:

- Chose two representatives to be member of the Advisory Council.
- Establish a list of suggestions for optimizing and evolving IMEO
- Engage and report back to the Advisory Committee members in an appropriate fashion.

Conflicts of interest

- Members of the Advisory Council will be asked to disclose any conflicts of interest or apparent conflicts of interest. Conflicts of interest may include a financial stake in a company that is part of a proposal, a consulting agreement with a company, or having financial incentives that could be related to the funding of a certain institution (such as working in the same university department as a proposer). In the case of a conflict of interest, the Advisory Council member will be asked to remove themselves from the discussion of that topic.

Attendance

- Quorum will be considered to be achieved if over half of the Advisory Council members are present at a meeting.
- Attendance at $\frac{3}{4}$ of meetings over the course of two year is required to maintain in good standing as a member of the Advisory Council. A member who misses a significant number of meetings may be asked to step down.